Study of using leaf sewing machines on quality of basma tobacco in different curing conditions

Mohsenzadeh, R.¹, Yaghooby, Y.¹, Davanlou, A. R.¹, Ahmadi, M.² and Shahadatimoghadam, Z.³

1. Industry and production department of Tirtash Research and Education Center
2. Technology department of Tirtash Research and Education Center
3. Biotechnology department of Tirtash Research and Education Center

Abstract

One of the oriental tobacco cultivation processes that require most labor is stringing. This survey was done for localization and determination of stringing machine performance on basma tobacco and also determination the percent of labor saving in comparison with traditional stringing method with factorial experiment in a randomized complete design in 3 replications with 9 treatments in Tirtash research and education center. This study was done with basma cultivation in a 3000m² plot and all of the planting to harvesting steps was done according to tradition. Treatments were cured after each pick up with 3 stringing methods (stringing with hand, sewing machine and rack machine) and 3 curing methods (sun curing, traditional barn and semi-modern barn). Number of Labor, stringing time, labor costs, total cost, average tobacco price and sugar and nicotine percent were calculated. Analysis of variance showed that stringing methods for time, labor number, labor cost and net income and methods of processing for average tobacco price, sugar and nicotine had significantly different at 1% level. Results showed that traditional stringing and sewing machine have the highest and lowest labor cost with 22 and 5/3 million rials respectively. Comparison interactions between treatments showed that use of sewing machine in the traditional barn and collector with 85 million rial in hectares had the highest net income. Using of sewing machine reduced number of labor and labor cost about 75% in process after harvesting.

Key words: Stringing; Sewing machines; Curing; Basma tobacco; Collector